

# REVIEW OF SCIENTIFIC INSTRUMENTS

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# PROCEEDINGS OF THE 13th TOPICAL CONFERENCE ON HIGH TEMPERATURE PLASMA DIAGNOSTICS

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### **PROCEEDINGS OF THE 13th TOPICAL CONFERENCE ON HIGH-TEMPERATURE PLASMA DIAGNOSTICS**

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$$1/3 \text{ the number of manuscript pages} + 1/4 \text{ the number of figures.}$$

This formula is based on manuscripts prepared using 1 inch margins on either side of the page and 12 point size type. A manuscript with 1 inch margins typed at 12 point size should be 9 pages long minus 1/4 of a page for each figure, for example, 8 1/2 pages with 2 figures, 8 pages with 4 figures, 7 pages with 5 figures, etc. (based on 1 column wide figures).

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The above calculation is obviously quite approximate. By using the "Instructions" sheet (see reverse side) a more detailed calculation can be made. As printed in the journal, 467 lines of plain text occupy 4 pages. On average, there are 60 characters (including spaces) per line, and so the number of lines in the text can be counted by a word-processing at 60 characters per line. Figures, tables, etc. can be reduced to an equivalent number of lines as shown in the sheet.

The instructions appear formidable at first glance, but it is not difficult to follow them in detail. Use that procedure to make a more accurate estimate.





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## ***How to Submit an Electronic File for Production of Author Proofs***

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- **Please use the REVTeX macros or Word/WordPerfect Author Toolkit**, available FREE of charge from AIP (see below for details on how to obtain the macros or Toolkit), to typeset the final version of your paper.
- After your manuscript is accepted for publication (not before), please send your final version on disk to the RSI Editorial Office. Also include a printed copy of your manuscript, including hard copies of your figures. The file on disk and the hard copy must match exactly.
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- **Anonymous FTP:** The Toolkit is available via anonymous FTP from [ftp.aip.org](ftp://ftp.aip.org) in the directory `/ems`. REVTeX macros may be found in the directory `/revtex`.
- **On disk (Mac or PC):** Send an e-mail message to [toolkits@aip.org](mailto:toolkits@aip.org).

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***Questions? Send them to [esubs@aip.org](mailto:esubs@aip.org)***

## INSTRUCTIONS TO AUTHORS: SUBMITTING ELECTRONIC GRAPHICS FILES

The American Institute of Physics is accepting electronic graphics files for production of author proofs and subsequent publication of articles.

If your electronic files are received after we have already processed the hardcopy illustrations, the electronic files will not be used. It is important that these procedures be followed precisely for the graphics files to be of use in the initial journal production process.

Although you are still required to send hard copies of your figures to the editorial office of the journal in which you are publishing, we strongly encourage you to send electronic graphics files to AIP to receive optimal quality. Send every figure in the article, in particular, halftones and combinations (line art + halftone). Computer-generated illustrations, when output to laser printers, produce a screen. These figures are the most problematic, because scanning screened output produces an unacceptable moiré pattern. Line art is less problematic for AIP, but is also accepted electronically, providing the line weights are sufficient (see *Instructions for Preparation of Illustrations* on side 2 of this sheet).

Files should be sent to AIP as soon as you receive the letter of acceptance from the editorial office. Sending the files as soon as you know the AIP code number (e.g., 001704jap) will ensure that AIP will use your electronic graphics.

Before you send the files, please make sure that you have read and followed these instructions.

### ELECTRONIC GRAPHICS CHECKLIST:

- Article has been accepted for publication by the editorial office. Do not send electronic graphics prior to acceptance.
- Files are in acceptable formats (PS, EPS or TIFF).
- File settings are in accordance with AIP electronic submission requirements.
- Files are named according to AIP file naming conventions.
- Files have been checked for extraneous header information in the body of the file (for example, if you have received graphics files via E-mail, headers must be edited out).
- All figure files for the article have been FTP'ed to AIP.

### ACCEPTABLE FORMATS:

AIP can accept PostScript, EPS (using either Arial or Times Roman fonts), or TIFF (lzw compressed) files. We cannot accept application files, e.g., Corel Draw, etc.

### SETTINGS:

1. Size your illustrations according to your journal's specifications. Submit each illustration at the

final size in which it will appear in the journal. The standard is 8.5-cm maximum width (3-3/8" or 20.5 picas) for one column.

2. Set the graphic for 600 dpi resolution for line art, 264 dpi for halftones (noncompressed), and 600 dpi for combinations (line art + halftone).
3. Ensure that line weights will be 0.5 points or greater in the final published size. Line weights below 0.5 points will reproduce poorly.
4. Save the files to grayscale (B/W), not color.

### FILE NAMING CONVENTIONS:

Use the 9-character alphanumeric AIP code number (included in the letter of acceptance you receive from the editorial office), and name the files as follows:

[9-character AIP code No.][figure No.][file format]

Example: 001704jap1.ps

### FTP INSTRUCTIONS:

1. It is important that the files are not compressed. Do not use uuencode, BINHEX, zip, or any other compression utilities.
2. Make sure there is only ONE figure per file. Each figure file should include all parts of the figure. For example, if Figure 1 contains three parts (a, b, c), then all of the parts should be combined in a single file for Figure 1.
3. Delete extraneous header information (if necessary). The only data in the file should be the figure itself.
4. FTP to ftp.aip.org  
Login as anonymous  
Password: Your full E-mail address  
cd /elecsubs  
For TIFF files only, type "bin" for binary transfer of files  
put \*. \* [file names]  
To logout, type "bye"
5. If you were unsuccessful in initially FTP'ing the files (due to a broken FTP connection, etc.), you should try to FTP them again. **IMPORTANT:** Use the following altered naming convention for resubmitting files. Since you will be unable to overwrite the first attempt, you should name your file as follows:

001704jap1.ps.2 (add the .2 extension)

### USER SUPPORT:

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Questions regarding AIP electronic submission procedures may be sent to [esubs@aip.org](mailto:esubs@aip.org). These instructions may also be found on the AIP Physics Information Netsite at [www.aip.org/epub/submitgraph.html](http://www.aip.org/epub/submitgraph.html).



## INSTRUCTIONS TO AUTHORS: PREPARATION OF HARDCOPY ILLUSTRATIONS FOR SCANNING

When preparing your hardcopy illustrations for submission, note that they will be scanned using a digital scanner and integrated with the text of the article, creating completely electronic pages. Please adhere to the following guidelines when preparing your hardcopy illustrations for submission:

- **Number figures in the order in which they appear in text.** Label illustrations with their number, the name of the first author, and the journal, on the front of the figure well outside the image area.
- **Place only one figure per page.** Place all parts of the same figure on one sheet of white bond paper, spaced 1/4 in. apart, using a glue stick or wax on the back of the illustration and leaving a 2-in. bottom margin. Label all figure parts with (a), (b), etc. Make sure each figure is straight on the page. *Photocopies of artwork are not acceptable.*
- **Prepare illustrations in the final published size, not oversized.** Size your illustrations according to your journal's specifications. Submit each illustration at the final size in which it will appear in the journal. The standard is 8.5-cm maximum width (3-3/8" or 20.5 picas) for one column. This is especially important for screened or shaded illustrations; reduction of screened/shaded originals during the digitizing process introduces an unacceptable moiré pattern.
- **Do not use correction fluid or tape on illustrations.** The scanner is extremely sensitive and reproduces all flaws (e.g., correction fluid, tape, smudges, dust). *Do not write on the back of the figure* because it will be picked up by the scanner.
- **Ensure a minimum of 8-point type size (2.8 mm high; 1/8" high) and 1-point line width within illustrations.** Ensure that line weights will be 0.5 points or greater in the final published size. **Line weights below 0.5 points will reproduce poorly.** Avoid inconsistencies in lettering within individual figures, and from one figure to the next. Lettering and symbols cannot be handwritten. Avoid small open symbols that tend to fill in if any reduction is necessary.
- **Authors' laser-generated graphics are acceptable only if the lettering and lines are dark enough, and thick enough, to reproduce clearly,** especially if reduction is required. Maximum black-white contrast is necessary. Choose a laser printer with the highest dot-per-inch (dpi) available (i.e., the highest resolution possible). Remember that fine lines in laser-generated graphics tend to disappear upon reduction, even if the oversized original looks

fine. To receive optimal quality, we strongly encourage you to send electronic graphics files to AIP, rather than laser output. In particular, halftones and combinations (line art + halftone) should be submitted electronically. Computer-generated illustrations output to laser printers produce a screen. These figures are the most problematic, because scanning screened output produces an unacceptable moiré pattern.

- **Submit continuous-tone photographs in final published size on white glossy or matte paper.** Avoid glossy paper stock that is off-white, ivory, or colored because contrast within the illustration will be lost in reproduction. Print the photograph with more contrast than is desired in the final printed journal page. Avoid dull, textured paper stock, which will cause illustrations to lose contrast and detail when reproduced.

### GLOSSARY OF GRAPHICS TERMS

**Continuous-Tone (Contone)** - A photographic image that contains gradient tones from black to white.

**Halftone (HT)** - The reproduction of continuous-tone artwork, such as a photograph, through a screen, which converts the image into dots of various sizes.

**PostScript (PS)** - A general purpose programming language with powerful graphics capabilities. Its primary application is to describe the appearance of text and images on printed or displayed pages.

**Encapsulated PostScript (EPS)** - A standard file format for importing and exporting PostScript language files among applications. EPS files describe the appearance of a single page, and can contain any combination of text and graphics. Typically, the purpose of the EPS file is to be included, or "encapsulated" in another PS language.

**Tagged Image File Format (TIFF)** - A tagged-based universal graphics file format for storing and interchanging images. It is not a page description language.

**Moiré** - The undesirable screen pattern caused by scanning screened artwork, such as halftones. It is the interference pattern that usually occurs when two or more patterns superimpose.

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### **Instructions for Submitting Graphics Files to AIP** (see additional info at <http://www.aip.org/epub/submitgraph.html>):

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[AIP ID][figure number].[file format]      An example is 012001con1.ps
- (2) **File Formats:** The only file formats accepted by AIP for graphics files are PostScript, Encapsulated PostScript, and TIFF (i.e., .ps, .eps, .tif).
- (3) **Use FTP** to transfer your graphics files (not text files) to AIP.
  - (a) **Do not compress** your files. Do not use uuencode, BINHEX, Stuffit Archive, zip, or any other compression applications.
  - (b) **FTP to ftp.aip.org**
  - (c) **Login:** anonymous
  - (d) **Password:** your full email address
  - (e) **Change directory to /elecsubs**
  - (f) **Transfer files:** as **ASCII** for PostScript and Encapsulated PostScript files  
as **BINARY** for TIFF files

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For example,      **TO:** rsifiles@aip.org      **SUBJECT:** 012001con.doc

[Word users: use the extension ".doc". TeX users: use ".tex". WordPerfect users: use ".wpd".]

- (3) In the message, indicate the **application and version number**, e.g., "This is a Word 6.0 file."
- (4) Your text file should be an **attachment** to the message, not part of the message itself.